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*Extract from* "GEORGE FOX *and his first Disciples.*" By WILLIAM HOWITT.

The character of George Fox—the Founder of the Society of Friends—and the principles he promulgated, are more deserving of particular notice and serious inquiry, than the world has ever given them credit for. They are especially worthy of them at the present moment. It has been the custom to regard Fox as a well-enough-meaning sort of person, but at the same time an incorrigible fanatic, a man of wild and ultra notions, of singular dress and manners; in short, a fit subject of ridicule—and little more. The Society that he founded has been looked upon pretty much in the same light. It has been seen to consist of persons very peculiarly old fashioned in their dress, precise in their demeanor, reserved in their habits, devoted to trade, not devoted to public amusements, fond of the singular number in their language, but of the plural in their accounts; accumulating money, and loath to spend it upon parsons; having an equal horror of fashions, fiddles and fencing masters; hating tithes, church-rates, and war-taxes; having a shrewed, dry, mode of expression and of dealing; prone to ask sly questions, but difficult to drive into a direct answer—yet, withal, discovering many traits of benevolence; strongly addicted to prison discipline, Friendly and Dorcasian Societies, and making determined war on Negro Slavery. This is as they have appeared to the eye of the world, and George Fox has had the credit of it. People have concluded that he was just such a man himself, and impressed these strong and peculiar features indelibly upon them. Few have cared to inquire further; to learn whether these obvious peculiarities were all that constituted them a Society, —whether they had not some principles, religious, moral, and civil, of greater intrinsic value.

George Fox, was one of the greatest and most noble minded of reformers. We shall find him one of those rare characters that have but a single object, in existence, and are ready to sacrifice everything for it—the establishment of Truth as the rule and the good of man: and we shall find him not more quick sighted to discover it, than bold to avow and maintain its cause. On almost all those great questions of civil and religious polity which the world is now coming to a late discussion of, he made up his mind at once, and as at one [illegible]ndid leap across the broad morass of the errors and sophistries of ages. The grand discovery at which he arrived was the clear perception of the spirituality and all-sufficiency of Christianity,—that it is a law to which we must bend all our morals, manners, and institutions, and not seek in vain, to make it conform to them. His system was therefore simply the system of the New Testament, not as it is interpreted by partial interests and preconcerted creeds, but by the broad, common-sense impressions of men—the fountain of all true knowledge in politics and morals, as well as in religion—the source whence all true philosophers and originators of systems do but draw their lights, and whence historians have yet much to learn and much to teach; eventually remoulding all society, by reviewing the human annals in its spirit, and meeting all actions by its standard. The Christian system is that alone which recognises the great rights of humanity; civil and religious liberty, in its fullest extent; the casting down of all monopolies in religion, in trade, in education; the abrogation of every law, however ancient, however sanctioned by grave authorities or extended practice, which is not founded on the eternal principles of justice; and the erection of the Divine law of Love in its stead. It holds in abhorrence customs, however deemed by ages and nations to be allowable,—the customs of national bloodshed, and national force, for determining questions of right. This was his system, a system certainly of most Radical Reform,—the system of abandoning the pernicious doctrine of expediency, the authority of names and precedents, —and substituting that of "doing to others, as you would be done by;" and so far was it carried beyond the notions of that age, and even of this, that it placed women on a footing of social equality with men, and gave them, in his society, meetings of civil discipline of their own, where they transacted their own affairs of association,

and learned to rely on their own intellectual and moral resources.

He was born in 1624, at Drayton, in Leicestershire, and apprenticed there to a small farmer and shoe-maker. To the farming he voluntarily attached himself, and as he advanced to manhood, working alone in the solitary fields, his active and sensitive mind began powerfully to turn its inquiries upon itself—upon its own nature and destiny,—what it was, why here, and whither advancing,—questions that one would imagine must vividly affect every living spirit, but which appear little to visit the multitude, and sink deep only into minds of a certain temperament. Soon satisfying himself that Christianity was the best and only guide in this inquiry—the only philosophy which can solve the great mystery of human existence,—he next was anxious to possess himself of the best means of studying it. Taught, as the bulk of the people are, and ever have been, not to depend upon their own inquiries, but to lean upon somebody in the shape of a priest, he immediately went to those who had the greatest reputation in his neighborhood. How well qualified they were to instruct such a mind as his, may be sufficiently understood from this:—the first advised him, in order to settle his spirit, "*to chew tobacco, and sing psalms.*" He went afterwards to a Dr. Cradock, of Coventry, who began to condole very sympathetically with him, till George happened to set his foot on the edge of a flower-bed, as they walked in the garden, which put the priest into a passion, "as if his house was on fire,"—and all was over. At length he saw the whole Christian system in so clear and beautiful a light that he was not only filled with happiness for himself, but felt it his bounden duty to go forth and proclaim it to the world. To him the gospel appeared a free gift—that every one might literally come, and receive it without money and without price,—the Bible, a book that every one might study for himself,—and that to every such sincere student, would be vouchsafed free teaching of the Eternal Spirit, and that he would be led to a perfect knowledge of the Divine will; that the great essence of Christianity was Love, and that all true Christians must, in reality, become a band of brothers. Against mercenary preaching, the vanity and pride of life, against all oppression and systematized wrong,—war, slavery, the plunder of wrecks, he wrote to the authorities, and preached to the people, with a fiery and impetuous eloquence. How far he was qualified for this great undertaking, we may learn from a very competent judge, William Penn, who had seen human life from the palace to the cottage, and whose own honorable and capacious mind made him a fitting evidence. Penn says, George Fox was above the ordinary size, of a graceful countenance, and having an eye so piercing that many who contended with him were unable to bear it; that he had great majesty of presence, and that his addresses to the people possessed a strange and stirring power, so that whole multitudes—collected in market-places, in the open fields, under the shade of large trees, on wild heaths, sea-shores, or amongst the mountains of Wales, Scotland, and Westmoreland, and amid the forests of America, or the plantations of the West Indies—were wonderfully moved, and melted, subdued or exalted, by his grave and burning eloquence, and by the bold, simple dignity of the doctrines he taught. His system of a free gospel, and renouncement of the vanities of the world, was sure to bring upon him all the vengeance of the proud and interested; yet, in spite of this, not only the common people, but clergy, magistrates, and officers of the army, came over to his opinions, and enrolled themselves in his new Society. No idea can be formed from the numbers or character of the Society of Friends of the present day, of the number and character of those who mustered to the formation from every quarter. Vast numbers, during the hot persecution which fell upon them, went with Penn to his settlement in America, especially from the neighborhood of Kidsley Park, in Derbyshire, a favorite resort of Fox's. Fox himself appears to have been in prison not less than a dozen times, and frequently for a long period at once, as in Lancaster and Scarborough jails, where he lay for two years—prisons of the most filthy and dreadful description, and so open to the weather, that he is said scarcely to have been dry all that time.

It is not possible, in an article of this kind, to follow his career at length. It is enough to say, that a host of able and zealous coadjutors gathered about him, whose names, labors, and singular adventures, may be found in Sewell's history of this people. For the propagation of his sentiments, George Fox, as I have already hinted, visited all parts of the kingdom, some of them many times,—and extended his travels into the West Indies, America, Germany, and Holland. He had interviews with Cromwell, in which that great and wily adventurer used all that cant slang, and delt in those double *entenders* which he adopted towards the Puritans. "George," he would say, shaking him cordially by the hand at parting, "come often, for I feel if thou and I were often together, we should be nearer to each other."

In the presence of Protector or King, he never for a moment lost that simple dignity which distinguished him,—a Christian dignity of mind, so opposite to pride, that, while it made him feel no abjectness in the presence of human greatness, never inspired him towards the low and the poor with any thing but the most thorough courteousness, kindness and compassion. For these he always expressed the greatest sympathy, and so organized his own Society, as to restore them to

the rights and consideration of men. In the meeting-houses there was to be no place of distinction, except a railed gallery or platform in the front for the ministers, and a seat under it for the elders and overseers, that they might face the people, and preserve order. Besides this, there was to be no separate seats,—no squire's pew with its superior splendor,—no aristocratic elevations or seclusions in the house of God. All the seats were of the plainest description, and free to every one alike. The poor were to have a good English education given to their children; —and they themselves were not expected to wait till their necessities compelled them to come and receive a niggard allowance,—their needs were to be kindly, privately, and delicately inquired into by proper persons, and as unostentatiously relieved. So it was, and so it is to this day.

Penn says,—and his life shows it,—that Fox possessed, on all occasions the most undaunted courage. Though of an ardent temperament, yet he possessed such self-command as rarely, if ever, to be thrown off his guard, by insult and outrage, and he manifested the most forgiving disposition. He was simple, dignified, and manly in behavior; grave, yet affable and pleasant in conversation; and so ready in reply, as to continually baffle his most subtle antagonists. One instance may be given:—He was imprisoned in Launceston Jail, and brought up for trial before Judge Glyn. He was ordered to take off his hat. Fox inquired what authority there was in law or Scripture for this compulsion; at which the Judge fell into a passion, and cried, "take him away, jailer; I'll ferk him!" Soon after he sent for him again; and on seeing him, exclaimed, "come, where had they hats from Moses to Daniel? Come, answer me,—"I have you fast now?" Fox immediately replied,—"The three children were ordered to be thrown into the furnace with their coats, hose, and hats on." The The Judge instantly shouted,—"take him away, jailer!"

He married the widow of a Welsh Judge, (Fell,) at Swarthmore, in Westmoreland; and, on this occasion, set the example of that justice to all parties which he had made the law to his own Society. He called the children of the widow together, and ascertained from themselves, that they were not only satisfied with the marriage, but that it would be no detriment to their inheritance. He died at the age of sixty-seven, having seen a large community established on his principles, and that, too, through a career of the most violent persecution,—through the imprisonment of thousands at a time, and the destruction and seizure of their property, to the amount of more than a million sterling in value.

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NEITHER the evil nor the good that men do is ever interred with their bones, but lives after them.

*Extracts from a Memoir of* RICHARD REYNOLDS, *by his grand-daughter.*

(Concluded from page 567.)

In 1810, he had a painful and dangerous illness, from which he never recovered his wonted strength—though in the summer of that year, he went into Devonshire, in the hope that the carriage exercise and the pleasurable excitement he had ever been accustomed to derive from the beauties of the scenery, would be of service. In these, however, he was disappointed. He thus writes to a friend,—"I feel with increased consciousness the effects of old age—the decrease of mental strength with lessened bodily powers, of firmness of nerve and energy of mind. I find too, and I consider it wisely ordained in the constitution of mankind in their present state of existence, that with the power of enjoyment, the inclination declines also. I believe, few men with means so limited from education, so contracted a sphere of action, and that so occupied by the duties attached to my station in life as not to admit of much intellectual cultivation, have had a higher relish for the gay or the grand, the beautiful or the sublime, or the wonderful works of the Almighty in the outward creation; and I remember with gratitude, the admiration, the delightful astonishment, the rapture which scenes like those at present before me—the boundless ocean in its various states of awful agitation or placid expansion, excited the first time I beheld them, and frequently since. But I do not regret that the things which are seen, which are temporal and which I must so soon leave, now affect me so little; my principal, my frequent wish is, that those things which are not seen, but which are eternal, may be the objects of my solicitude in proportion to their incomparable importance, and my swift approaching, my almost *instant* interest in them." And to another friend he says, "My disposition indeed, to seek or expect happiness in or from outward things, seems to have decreased as fast as my powers have diminished. I am sometimes thankful, that my desires for an increase of spiritual-mindedness bear some proportion to the importance of it in the hour so swiftly approaching, when I shall have done with all the objects of sense, and when time shall be lost in eternity. . . . The broken slumbers in which my nights are frequently passed, have the advantage of favoring the immediate application of heart to the Lord, which he mercifully inspires and regards; and if I cannot say much of 'songs in the night,' I may to thee thankfully acknowledge that, through Divine favor, a degree of the spirit of grace and of supplication has been experienced more frequently at those times, and with nearer access to the footstool of the mercy-seat, than at some more appropriate seasons."

On the 24th of June, 1816, he set out on the

journey which he had been in the habit of taking once every year, to visit his children in Shropshire and at Liverpool. He arrived first at his son Joseph's house at Ketley, when his increased feebleness was very apparent, and a subdued feeling of mingled concern and pleasure was felt by my father and his family, as they welcomed him for what they all feared would prove the last time. He remained there but two days. I remember it was a beautiful bright summer morning on which he was to leave us, and we children were summoned into the parlor after breakfast, and the whole family gathered around him. His son read a chapter in the New Testament, and when the book was closed, there was silence and perfect stillness for some minutes. Presently my grandfather raised his head and looked round upon us, and we listened breathlessly, as he began to speak, saying this was the last time he should ever see us in this world—solemnly and sweetly he addressed us—then he spoke a few words of affection and hope to our father, and afterwards to his other relations; again there was silence, and we all felt that his spirit was engaged in supplication, shared in some degree by the hearts of all present. Then he arose, kissed us affectionately, and bade us farewell.

He reached Liverpool by short stages; whilst at Greenbank, the residence of his daughter, he gained no strength, but rather the contrary, and did not remain there long, returning to Bristol on the 19th July. Shortly after his return, his medical attendants advised his removal to Cheltenham, in the hope of relief from the biliary obstruction, which was the most obvious symptom of the decay of the bodily frame; and, although convinced in his own mind that no human means could restore the powers which a long life of more than eighty years had nearly exhausted, he was unwilling to leave anything undone which he considered was his duty, and consented to leave his own house, to which he expected never to return.

He arrived at Cheltenham on the 7th of August. From his daughter's letters to her family, we learn that he tried every measure prescribed by his medical attendants, with exemplary patience, and throughout his illness exhibited a marked gentleness of manner to all around him. He was tranquil, often cheerful, and always most affectionate and kind.

But little remains to be said of the last days of his earthly pilgrimage, and this account is chiefly derived from a memorandum, drawn up by his valued friend, Thomas Sanders. It appears that no decided change was observable till the 6th of September, up to which time he had taken his usual exercise, even driving the carriage himself, accompanied by his cousin or daughter only. On the sixth he walked out before breakfast, but soon afterwards became much weaker, and towards evening declined rapidly. On Sunday he partially revived, but sank again in the course of that night, never to revive. His son arrived on that day from Shropshire, and two of his grand-children from Liverpool the day following. For many years he had not been confined to his bed a whole day, and during the whole of this illness he had joined the family at their usual meals; but on Monday the 9th, he was persuaded to remain in bed till the afternoon, when he rose and drank tea with them, and did not retire for the night till his usual time. At five o'clock the next morning an alteration for the worse took place in his breathing. Some of his relatives who had left the room were called, but none of them thought his end so near. He inquired if his servant whom he had sent to Bristol for his will had returned with it, and on being told that he had, seemed satisfied. He had made it his earnest request to his daughter that she would be with him at his close, and now, about six o'clock, raising himself a little, his eye sought hers, and he signified that she should go to the other side of the bed; when turning on his side, and taking her hand in his and pressing it, he quietly and almost imperceptibly expired, on the 10th of September, 1816.

At his funeral, which took place on Monday, the 18th of September, the most marked, profound, and general testimonies of respect were spontaneously offered to his memory. Soon after eight in the morning, about 500 boys from the schools of St. James's and St. Paul's formed in two columns, extending from each side to the good man's dwelling across St. James's Square. On the appearance of the coffin, the boys stood uncovered. The streets were thronged with the poor. The resident clergy, and dissenting ministers of different persuasions, the gentleman of the committees of various charitable societies, and other of the leading citizens of Bristol and a numerous body of the Society of Friends, followed the procession of the family and relatives from the house.

"So great was the public curiosity excited on this occasion, and such the eagerness manifested by the poor, who had lost their best friend, to pay the last respect to his remains, that not only the spacious burial-ground was filled with spectators and mourners, but the very walls and tops of houses surrounding the area were covered in a remarkable manner. And it is but justice to add, that the behavior of this vast concourse of people was in the highest degree decent, orderly, and respectful; the poor at the same time considered it a favor to be permitted in their turn to approach the grave of their departed friend, and to drop the silent tear, as a mark of their regard for a man whose life has been spent in doing good."

For Friends' Intelligencer.

Having seen in the Intelligencer of the 6th of the present month, some statistics in regard to the number of meeting houses or meetings of Friends, I think there are some statements calculated to mislead, although in one sense they may be true. The account states that there are six meetings of Friends in Illinois, and five in Iowa. Now, if this is intended to include the Orthodox Friends it may be correct, but if not, it is an over estimate. It is probable there are many Friends that are looking to the western country with a view of procuring homes for themselves and families, and perhaps it would be acceptable to such to be informed as to the situation of our Society in the west. I have just returned from a visit to some friends in Iowa. I found no meeting established there, and but two settlements where they have a prospect of having any soon; one is in the north of Henry County, near to Wayne Post Office. A few Friends are living there, and it is expected a number more will soon arrive, and if they do, it is proposed to establish a meeting. These families are situated on the border of an extensive and beautiful unimproved prairie, where there are thousands of acres of excellent land owned by men who have bought it on speculation, and now offer it at from six to ten dollars per acre, according to quality and location. For further particulars, I would refer any one wishing information, to Caleb Russell or Bennet Waters, Wayne Post Office, Henry County, Iowa. The other settlement is about forty miles north of the above place, on the line between Muscatine and Cedar Counties—here are quite a number of Friends. Some have been there many years, but of late they have had quite an addition to their numbers, which encourages them to hope they will have meetings established soon. I would refer inquirers to John Wright, West Liberty Post Office, Muscatine County, Iowa. There are many other isolated families of Friends scattered throughout Iowa, but I know of no other settlement where they have a meeting. As regards Illinois, I believe there are but two meetings in that state at present, one is in Putnam County, where there is a Monthly Meeting, (a branch of Blue River Quarterly.) A meeting has been held here for twelve or fourteen years. For further information as regards location, &c., I would refer to Jehu or William Lewis, Magnolia, Putnam County, Illinois.

The other meeting referred to is in Fulton County, four miles from Vermont. There has been a meeting for worship held here for twelve years, and part of the time a monthly meeting, but several years since some Friends, like Wilkinson and Story, thought that as we professed to be governed by the spirit in our meetings we should have no discipline or order in the Church, but each one do as seemed good in his own eyes, not considering that order and discipline may be directed by the spirit of truth, and consequently useful in society when thus ordered.

I have frequently thought that it was desirable to have more correspondence or communication one with another, particularly those that are remote from the body of Friends, and as there are some Friends that are seeking homes in the west, and prefer to settle where there is a meeting, or a prospect of one, I have thought that the Intelligencer would be a good medium through which such information could be obtained. If some friend belonging to these isolated settlements would inform as to their advantages, location, &c., I doubt not it would be thankfully received by such as purpose emigration to the west. ROBERT WOOD,

Vermont, Fulton County, Illinois.
10*th mo.* 1855.

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For Friends' Intelligencer.

Died, in Burlington, N. J., on the 16th inst. STEPHEN GRELLETT, a minister in the Society of Friends, in the 83d year of his age.

Althongh this Friend was united with the other portion of the Society, his name is so extensively known that a notice respecting his death will not be out of place in your paper.

He was a native of France, and came early to this country, where he became convinced of the principles of Friends, and joined in membership with the Society. His public character for more than a half a century, has caused him to be well known, both in this country and in Europe. In the exercise of his gospel labors, he has visited almost every neighborhood where Friends are located, and has many times crossed the ocean under a sense of religious duty. In addition to his gospel services among Friends, he has visited most of the governments on the continent of Europe, often laboring with those in authority both in relation to the spiritual and temporal welfare of those over whom they were placed. D. P.

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BEAUTIFUL AND TRUE.

In a late article in Frazer's Magazine, this brief but beautiful passage occurs: "Education does not commence with the alphabet. It begins with a mother's look—with a father's smile of approbation or a sign of reproof—with a sister's gentle pressure of the hand, or a brother's noble act of forbearance—with handsful of flowers in green and daisy meadow—with birds' nests admired, but not touched—with creeping ants, and almost imperceptible emmets—with humming bees and glass beehives—with pleasant walks in shady lanes, and with thoughts directed in sweet and kindly tones, and words to mature to acts of benevolence, to deeds of virtue,

and to the source of all good, the Creator of the universe.

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For Friends' Intelligencer.

## EDUCATION.

So much has been said and written upon school discipline, that it seems almost an act of supererogation to attempt anything more on the subject: but, as I am one to whom youth ever brings visions of love and joyousness, I feel something yet remains to be offered on behalf of the listless occupants of the crowded school room.

Children are both physically and mentally active, and it is only by the successive exercise of these faculties, that they attain that development for which all education is intended. Any restraint that is not salutary, is unprofitable, and every hour, not devoted to the acquisition of knowledge, should be appropriated to physical exercise, or useful employment. They should never be suffered to remain in idleness. Nature, science and literature, present an ample field of interest and pleasure, and if agreeably unfolded to their minds, they cannot fail to become interested in them.

The great object of study is not to con page after page in some difficult text book, which is only learned to be forgotten, and if retained could be of little practical advantage, but, by bringing the powers of the mind to act upon the living ideas of the author, strengthen and improve the understanding, and induce habits of reflection and discrimination. Children should be taught to think correctly, their judgments should be exercised; instead of names, and rules without application, give them facts and principles, that when their school education is completed, they may be measurably qualified to enter upon the duties of life. The present system has too little connection with the daily occupation of more mature years. Are not habits of indolence and inactivity frequently contracted within the precincts of the school-room? Not that I would oppress the youthful mind, or tax the physical or mental powers above their ample ability to perform, but I would encourage them by illustration and familiar example, to persevere in the path of knowledge, till they attain the full development of intellectual strength. I would never cultivate the head at the expense of the moral feelings, but, by the education of the three-fold nature, seek to imbue them with individual responsibility and establish a sense of character and accountability.

Let the teacher regard his pupils not as refractory subjects whom he is to discipline only for this present scene, but as precious immortal spirits looking unto him for instruction and guidance. Instead of dwelling on their foibles, let him contemplate the divinity within them, then he will be less annoyed by the demands upon his patience, and better qualified to give them that instruction which will enable them to become useful men and women in the community.

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## SOMETHING NEW ABOUT THE AURORA.

To say that attempts have long and often been made to explain the cause of the aurora, is not new; but it will be new to many readers to hear that progress has been made in reasoning about this interesting phenomenon, as well as in the demonstration of facts less difficult of proof. According to theorists, the cause was to be found in certain effects of refraction, or antagonisms of cloud strata, or the presence of metal in a gaseous form in the atmosphere, or to cold, or to electricity; while others regarded it as cosmical—belonging to remote space. Among so many explanations, which was the true one? This was a question not easy to decide, and so savans have gone on experimenting and speculating with praiseworthy diligence and curiosity, for the one as well as the other is essential to the progress of science.

Professor de la Rive, of Geneva, is one of the few who have made the aurora a special object of study. Nearly twenty years ago he suggested that to one and the same cause was due the origin of hail, of electricity, of the variations of the magnetic needle, and of the aurora; and he now finds himself in a position to state, that the view then put forth has been confirmed by all subsequent observations. As chroniclers of the advances of science, we think we may worthily offer a brief outline of his theory, as developed by him in the *Bibliothèque Universelle de Genève.*

Let us premise that an aurora borealis is always preceded by the formation of a sort of vaporous vail on the horizon, which rises slowly to a height of from four to ten degrees. Presently, that portion of the sky which is in the magnetic meridian of the place of observation begins to darken with a brownish hue passing into violet, and embracing the segment of a circle. The edge of this segment is bordered by a luminous arc of brilliant white light, that sometimes quivers and dances, and appears in a strange kind of effervescence for hours together. A play of colors, through every tint, from the darkest to the lightest, with bewildering rapidity, long streamers flash upward to the zenith, and a sea of flame, traversed by dark rays, floods the northern sky. Then at that spot to which the magnetic needle points, the rays curve together, and form what is called the crown of the aurora. This result is, however, rare: when it does take place, it always announces the conclusion of the phenomenon. The vivid colors and undulations disappeared, and soon nothing but a few pale ashen-gray clouds are seen.

These appearances, which are familiar to many persons, are attended by certain remarkable phenomena: a crepitating noise, for example, not unlike the rapid flutter of a distant sail, which has been popularly described as the noise made by the petticoats of the merry dancers; and this sound is accompanied by a peculiar sulphurous odor. Positive electricity, too, has at such times been found in the air; the direction of the magnetic needle undergoes perturbations more or less intense, and so unfailingly that M. Arago, when pursuing his researches in the lower vaults of the observatory at Paris, could always announce the appearance of the aurora in our hemisphere from the movements of his needles. During an aurora in November, 1848, the instruments of the electric-telegraph between Florence and Pisa were as strongly magnetized as though the batteries—which was not the case—had been in action. The compasses of ships at sea have been at times so disturbed by the aurora, that vessels steered a false route; and the error was only detected after the phenomenon passed away.

We thus see a very intimate relation between the aurora and certain magnetic or electrical effects; and now we may proceed to M. de la Rive's theory. The atmosphere, he says, in its normal state is constantly charged with a considerable quantity of positive electricity, which increases in propertion to the height; while the earth, on the contrary, is charged with negative electricity. Between these two, a process of recomposition or neutralization takes place; most frequently by the humidity of the air; at times, by the fall of rain or snow; and less frequently by thunder-storms and water-spouts, which, in a very energetic form, exhibit the tendency of these two accumulated electricities to unite. The winds serve also to mingle them, wafting the positive to the negative, and the reverse.

It eas been proved that the earth is an almost perfect electric conductor, and that it is constantly traversed by electric currents. According to M. de la Rive, these currents are produced by the positive electricity of the atmosphere which enters the earth at either pole, because those points being covered by condensed vapors, present the best conducting medium. This is the normal process for establishing an equilibrium between the two electricities; the intense electrical discharges which take place, particularly with the tropics, constitute the variable or accidental process.

It is at the poles that the great electrical discharge takes place. "This discharge," says M. de la Rive, "when it has a certain degree of intensity, will be luminous, especially if (as is nearly always the case near the poles, and sometimes in the higher regions of the atmosphere) it meet on its way with those extremely tenuous frozen particles out of which the loftier clouds and mists are formed." O the existence of these particles, and in inconceivable numbers, there is no sort of doubt. In the balloon ascent of Barral and Bixio at Paris, in 1850, the aeronauts found themselves on a sudden, although the sky was cloudless, in the midst of a thin transport haze, which was alone produced by needles of ice so small as to be scarcely visible. Lunar halos, rain and snow, almost invariably precede an aurora: it is to the presence of these needles that the halos are due, and the rain and snow to their condensation of aqueous vapors. They form also the auroral vail, through which, owing to their tenuity, the stars are visible.

From simultaneous observations made by observers forty or fifty miles apart, the parallax of the aurora has been ascertained, and its height above the earth determined. This ranges from six to ten miles; the phenemenon, therefore, takes place within the limits of our atmosphere. With respect to the auroral arc, there is reason to believe it to be a luminous ring, with its center at the northern magnetic pole, and cutting the magnetic meridians, which converge toward that pole, at right angles. Hence it is that the apparent summit of the arc always appears to be in the magnetic meridian of the place of observation. The arc, moreover, is supposed to have a sort of rotary movement from west to east, which is precisely what might be predicated from the course of the electrical current.

The nearer we approach the pole, the more frequent are auroræ; and as the appearances take place in all northerly latitudes, it sometimes happens that the observer is surrounded by the auroral matter escaping from the earth, and he then hears the fluttering or rustling noise which has been alluded to. On this point, M. de la Rive speaks positively. He considers the cause to be "the action of a powerful magnetic pole on luminous electric jets closely surrounding it;" and by means of an ingenious apparatus he has succeeded in producing a similar noise with attendant phenomena. The sulphurous odor proceeds, as in thunder-storms, from the conversion of the oxygen of the air into ozone, by the passage of electric discharges. Like the noise the odor can only be perceived by an observer situated in the midst of the auroral matter.

A striking fact remains to be noticed; it is one that appears completely to identify the aurora with other electrical phenomena: the auroral light is not polarized, neither is there any trace of polarization in the light obtained from electricity by artificial means. No better proof of the identity of the two classes of phenomena could perhaps be furnished.

We have mentioned an ingenious apparatus contrived by M. de la Rive. With this, he brings his theory to the test of experiment, and, as we believe, makes out his case. It consists of a glass globe, in which is inserted an isolated

bar of soft iron, bearing a copper ring, which communicates by a wire with the conductor of an electrical-machine. On exhausting the air within the globe, and exciting the electricity, all the luminous phenomena of the natural aurora are produced around the ring and the bar.—*National Magazine.*

## FRIENDS' INTELLIGENCER.

PHILADELPHIA, TWELFTH MONTH 1, 1855.

We refer our readers to the communication of a friend from Illinois, and commend his suggestion with regard to the propriety of furnishing information as to the settlements of Friends in the Western country.

We are not surprised that many who have large families depending upon them for support, in view of the high prices of land and other causes which exist in thickly populated districts, should be looking towards a settlement in the fertile regions of the West; but we should regard it of very doubtful propriety for any Friend to emigrate into that country, and be so far separated from the Society, as not to enjoy the privileges which are conferred by religious associations with those of the same faith.

We have recently learned that in some of the Western States, and particularly in Illinois and Iowa, a considerable number of families of Friends are settled, who are not within reach of any established Meeting. Our sympathies are extended towards these, and we take this occasion to encourage them to meet together in small companies, or in families, for the purpose of social worship, believing that the divine blessing would accompany the service, and way would often open to make application to superior bodies for assistance to establish meetings, in the order prescribed by our discipline; and thus many an honest seeker might be induced to sit down in silence, and experience a renewal of spiritual strength, and a partaking of that bread which cometh down from heaven and nourisheth the soul unto everlasting life. Instances have occurred in the history of our Society, where the faithfulness of one or two Friends who have yielded to their religious convictions, and sat down in silence to seek after a qualification to approach the Father of spirits, has been the means of drawing others into a like exercise, and large meetings have thus been settled.

MARRIED,—According to the order of Friends, on the 23d of Tenth month last, HENRY ATKINSON, of Philadelphia, to SARAH A. CORLIES, daughter of Henry P. Corlies, late of the city of New York.

——, At the residence of William Eyre, on the 25th of Tenth month last, according to the order of the Society of Friends, JOSHUA EYRE to ANNA R., daughter of William and Elizabeth A. Eyre, all of this city.

——, According to the order of Friends, on Fourth day the 7th ult., JOSEPH BUNTING, JR., of Darby, to ELIZABETH S. MILLER, daughter of Levis Miller, of Upper Providence, Delaware County.

——, According to the order of the Religious Society of Friends, at Camden, Kent Co., Delaware, on the 13th inst., JOHN HUNN to ANNE E. JENKINS, daughter of Jabez Jenkins, all of that place.

——, On the 15th ult., at Dunning's Creek, according to the order of Friends, ENOS BLACKBURN, of Napier Township, Bedford Co., Pa., to ANN CONTENT GARRETSON, of the same place.

DIED,—On the 25th of Tenth month last, SILAS D. EDSON, a member of the Monthly Meeting of Friends of Philadelphia, in the 49th year of his age.

——, On the 16th of Tenth month last, at Toledo, Ohio, ANNE M., wife of Edward Walton, formerly of this city, in the 35th year of her age.

——, On the 18th inst., at his residence in West Philadelphia, WM. RICHARDS, a member of Philadelphia Monthly Meeting, in the 34th year of his age.

——, At his residence in Alexandria, Va., on on the 17th ult., REUBEN ROBERTS, in the 45th year of his age—a member of Alexandria Monthly Meeting.

——, At Hogue Creek, Va., on the 8th of Seventh month last, DAVID L. WRIGHT, in the 13th year of his age; and on the 14th of Eleventh month last, JONATHAN A. WRIGHT, in the 8th year of his age—both sons of Amos and Rachel Wright.

——, At his residence near Fair Haven, Preble Co., Ohio, on the 8th ult., after a short and severe illness, ABRAHAM BALLINGER, aged about 51 years. The deceased was a consistent member of Westfield Monthly Meeting of Friends, and a steady attender of all our religious meetings—encouraging his family by precept and example to a faithful observance of this duty. He has left a widow and a large family of children to mourn his loss.

——, On the 19th ult., after a very short illness, LYDIA, wife of James Henry, of Penn Township, Clearfield Co., Pa., in the 82d year of her age.

NATIONS in a state of war are like individuals in a state of intoxication; they frequently contract debts when drunk, which they are obliged to pay when sober.

A PERSIAN PHILOSOPHER, being asked by what method he acquired so much knowledge, answered, "By not being prevented by shame from asking questions when I was ignorant."

NONE have ever been so good and so great, or have raised themselves so high, as to be above the reach of trouble. Our Lord was "a man of sorrow."

EXTRACT FROM A LETTER OF A CORRESPONDENT IN EUROPE.

Continued from page 566.

DUBLIN, 10th mo. 1855.

We spent a day or two in Birmingham, visiting the places of interest in that busy city. We were kindly accompanied by J. S., to the papier mache factory, where we saw the interesting process of making the common brown paper into the beautiful portfolios and work-boxes seen in the Chesnut St. stores. The complete machinery that makes the hook and eye was also explained, from the plain straight wire to the completion of the hook. Of these, ninety-six are made in a minute, and one hundred and twenty eyes in the same time. On our way to Edinburg, we stopped at Melrose Abbey, but its beauties are beyond my powers of description. The ivy grows in luxuriance upon its walls; the jackdaws make their noisy clamor in the desolate cloisters; the little wren has built her nest in the canopy that once covered the effigy of some worthy saint, and kind Nature has thrown her velvet green upon the stone floor that marks the vaulted sepulchres of the departed. The town of Melrose is an unimportant little place, save its poetical attractions. The Eildon hills stretch themselves beautifully along the eastern side of the town, and give the traveller a fine view of the surrounding country. After an hour's ramble upon them, we took carriage for Abbottsford, the former residence of Sir Walter Scott. It is romantically situated upon the river Tweed, and occupied by his grandson, W. S. Lockhart. The grounds are extensive, and under a high state of cultivation. The minstrel's servant acted as our guide through the suite of rooms, giving a hurried account of interesting relics and collections from various sources. We entered his study from the hall: in the middle stands his writing table and chair, with a revolving stand near by, for books of reference. There is a private stairway leading to his gallery of books, which contain twenty thousand volumes, as he left them. A door opens from this to his bed-room, adjoining which is his library, containing many valuable relics, and the walls were covered with paintings. We arrived at Edinburg late in the evening. It is a beautiful city, not so much in architectural appearance, but its situation at the foot of the hills that surround it. The river Leith divides it, or rather, the town is built upon both sides of the river, and rises gradually up the hill-side. By gas light the effect is very fine. The houses seemingly peer up one above another, to meet the starry skies above them. Some of the houses are ten or eleven stories high—many six or eight, and yet the occupants have seldom to go more than four or five stories. They have what are called *"closes"*—what we term courts: one part of a building faces the street, the other is entered by a "close" leading down a steep walk, (or sometimes steps) to the other side of the house, so that you may see a five story building in one street, and in another, ten. The city is regularly laid out. There are handsome shops, many noble edifices, public and private institutions for charitable purposes, &c. A walk upon the hills, gives the tourist a fine view of the city and its environs. At Calton Hill we take a survey of the Castle situated at the opposite side of the city, with its cluster of houses for the Highland soldiers and their families, work shops and other buildings, which form a considerable settlement. When at the castle, we have a fine view of Calton Hills, with its monuments and observatory. A stroll upon the Salisbury cliffs affords a beautiful prospect of the plains below, spoken of by Hannah More. The sheep were seen grazing upon green herbage, but the 'shepherd of Salisbury plain' was not there. We visited, also, Holy Rood palace, once the residence of Mary, Queen of Scots, where she experienced so much sorrow. In the centre of her garden stands a remarkable dial. There is also an old apple tree planted by her, perfectly hollow, but still bearing fruit. It was late in the season, but we concluded to visit Loch Lomond, the "queen of Scottish lakes." It is diversified with rocky hill, and wooded glen, scenery that inspired the poetic strains of Scott and Wordsworth by the beauty and grandeur that everywhere surrounds the beholder. The head of the lake, at the entrance of the river is the most beautiful. As the boat nears the shore the water which had been of a greyish hue, now becomes black, clear and perfectly smooth, reflecting the rich highlands in their Autumn robes, the slaty rocks, the mossy banks, the blue sky, the people on shore are all reflected in this beautiful mirror.

We landed for half an hour, gathered wild flowers and ripe blackberries, reviewed the beauties of nature, and swiftly glided down the lake, reaching Glasgow in the evening. The next day we took cars for Greenock, thence by steam to Belfast, which is a busy commercial city. Here we visited a large flax factory, and saw the whole process, from the carding of flax to the weaving of twilled linen. Another establishment for designs and working muslins was also interesting; they explained to us the devising and grouping of flowers for patterns, the process of transfering them to paper and then to the steel press, from which any number of impressions may be taken. About 500 men and women are employed in the flax factory, and 80 girls in the sewing establishment. The wages are very low. We also rode out to the Botanical Gardens; the plants were arranged according to their different orders, and many beautiful flowers and exotics were in bloom. The general arrangement of the grounds, containing five or six acres, were well worth a visit. We took cars for Dublin, and are much pleased with the city. Its universi-

ies, colleges, charitable institutions, park and zoological gardens present a variety of attractions. On First day morning we attended Friends' Meeting. There are 600 members belonging, and there was a considerable attendance. A female friend who sat near, extended us a friendly greeting at the close, and finding we were Americans, proffered her hospitality. She took us to "Friends' Reading Room," a fine building, where lectures are delivered during the winter. There is access to the Library, at certain hours every day, through the year. She introduced us to several friends, with whom we formed a most agreeable acquaintance, and whose kindness and hospitality will long be remembered. We visited "Friends' Retreat for the Insane," and some of the hospitals and institutions with satisfaction. We were present at the opening meeting for the season, of Friends' Literary Association. They call it the "Friends' Soiree." Tea, coffee and cake were handed, and the social feeling which prevailed was very pleasant. It gave us the opportunity of seeing about 200 Irish Friends, among whom were the familiar names of those who were so actively engaged in relieving the distress occasioned by the famine in Ireland. The opening address was delivered by Dr. H. We feel very grateful for the kindness we have received from Friends', both here and at other places. They are quite different in some respects, from *Friends* at home. They are much more in public life, less constrained by usages of sect, and as a class, not so particular in dress and language.

(To be continued.)

## METEOROLOGY OF FARMERS.

Lieut. Maury, some few years ago, accomplished a very useful undertaking when he so far interested navigators in his plan of meteorological observations as to engage them as collaborators in the work, by which every vessel upon the ocean was converted into a floating observatory. The benefits to commerce and navigation have been remarkably exhibited in the "Wind and Current Charts," which present the most extended series of meteorological observations ever undertaken, and by the experience and laws deducible from the facts thus collected, millions of money are believed to be saved annually to commerce and thousands of lives to the country. This system it is proposed to extend to the land as well as the sea, so that the farmers and planters may be as much benefitted by scientific discovery as the merchant and mariner. All that is required is the assistance of agriculturists themselves. He proposes that the farmers and planters should co-operate all over the country in a regular and systematic method of meteorological observations. The information so collected as to the winds, rain, and similar phenomena, is to be forwarded to Washington, and measures are to be adopted to enlist the agency of the Government in arranging the facts for publication. Nothing could be more simple than this plan; none could be devised which would engage a greater number of intelligent men in the undertaking, and which could be so economically carried into practice. The county agricultural societies over the country should adopt the suggestion immediately, and endeavor to promote the object. The farmer's interests are identified with those of commerce, and a co-operation of both for scientific objects, mutually instructive and beneficial, is one of the most useful works in which they can be engaged. There can be no doubt that the Government will lend its aid to the furtherance of this great work. Lieut. Maury states that such an office as will be required in Washington to carry out the details of this plan is already in existence. It was established by Mr. Calhoun when he was Secretary of War, and it is under the control of the Surgeon General of the army. The meteorological observations that are made at our military posts are discussed and published at this office; and "one of the most valuable and interesting reports concerning the meteorology and climates of the country that have ever appeared is now in course of publication there." Lieut. Maury, in broaching his plan to a friend, says:

"As for giving the scheme a trial and carrying it into a demonstration far enough to show what a systematic plan of observations will do for the advancement of agricultural meteorology, and for the benefit of farmers and planters, I'll answer for the observations, if Government will pledge the means for their discussion and publication. I'll go further, and promise that the observations shall be furnished to the Government for such a purpose *without cost*. You know the materials for the 'Wind and Current Charts' were all furnished gratuitously, and that, without asking Government for a single cent, we have literally covered the ocean with floating observatories, and converted every ship that sails into a temple of science. Not only Government, but nations and people have united with me, and are assisting to carry out a system of meteorological research for the sea. As much may be done for the land, if the planters and farmers of the United States will only second the effort, and tell their Representatives in Congress that they want as much done by the Government for agricultural and sanitary meteorology as it has *permitted* to be done at sea for the benefit of commerce and navigation. By the saving of time on the voyage and the lessening of the dangers by the way, these interests, it has been computed, both in this country and in England, have been benefitted to the extent of millions annually. Some of these benefits have inured also to agriculture, not only by giving an opportunity to the farmer to get markets beyond the sea cheaper, and ena-

bling ships to fetch and carry for him at lower figures, but by bringing within reach markets which before were inaccessible by reason of the great length *in time* of the voyage."—*Public Ledger.*

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THE GULF-STREAM.

It is a singular fact, that two of the most important of the industrial arts—the extraction of food from the soil, and the transportation of commodities to and from distant regions—have, from time immemorial, been the occupations of the most ignorant and prejudiced classes of mankind. The sailor, who witnessed the wonders of the great deep, was as little impressed by its marvellous phenomena as the ploughman, who, amidst the wonderful and mysterious processes of vegetation, whistled as he went for want of thought. The boon which astronomy conferred upon the navigator may be compared to that which chemistry subsequently afforded to the agriculturist. Yet neither was sufficient. Vegetable physiology next aided the tiller of the soil; but the plougher of the deep, ignorant of its prevailing winds and currents, still empirically followed the devious tracks of the old voyagers. At length Lieutenant Maury, of the United States' navy, by collecting and collating an immense number of journals and log-books, was enabled to produce the *Wind and Current Charts*, that have caused so marked a progress in the art of navigation. From these charts, in their turn, Lieutenant Maury has written the first *Physical Geography of the Sea*. The aim of this work is, as the author tells us, 'to present the gleanings from this new field in a manner that may be interesting and instructive to all, whether old or young, ashore or afloat, who desire a closer look into the wonders of the great deep.' Gleaning principally from this most industrious of gleaners in the wide field of science, let us attempt to describe one of the most remarkable of all known oceanic phenomena—the mighty current which ceaselessly flows from west to east, across the bosom of the North Atlantic. The fountain-head of this ocean-river, as it may well be termed, is in the Gulf of Mexico. From thence, it flows north-easterly along the shores of the United States, until it reaches the banks of Newfoundland; then stretches across the Atlantic to the British Islands, where it divides into two parts—one flowing northward to the Arctic Sea, the other southward to the Azores. In the whole world, there is not so majestic a flow of water as this ocean-river. Its current is more rapid than the Amazon or the Mississippi. In the severest droughts, it never fails; in the greatest floods, it never overflows. Though its banks and bed consist of cold water, yet the river itself is warm; and so great is the want of affinity between these waters, so reluctant are they to mingle with each other, that their line of junction is often distinctly visible to the eye: one half of a ship may frequently be perceived floating in the cold ocean-water, the other half in this warm current, known to mariner and geographers as the Gulf-stream.

Long before the discovery of America, the Gulf-stream, by carrying nuts, bamboos, and artificially carved pieces of wood to the shores of Europe, indicated the existence of a western continent. Columbus himself was told by a settler in the Azores, that even strange boats had been seen, constructed so that they could not sink, and managed by broad-faced men of foreign appearance. Without doubt, these men were Esquimaux Indians. Wallace, in his *Account of the Islands of Orkney*, tells us that, in 1682, an Esquimaux was seen in his canoe off the south side of the island of Edda by many persons, who could not succeed in reaching him; and another was seen, in 1684, off the island of Westram. Moreover, he says, 'be the seas never so boisterous, these boats, being made of fish-skins, are so contrived that they can never sink, but are like sea-gulls swimming on the top of the water.' Two more of these current-drifted canoes were subsequently found on the shores of the Orkneys; one was sent to Edinburgh, the other hung up in the church of Burra.

As if determined to make its course and existence known to the most unobservant, the Gulf-stream carried the main-mast of the English ship *Tillbury*, that was destroyed by fire off the coast of St. Domingo, during the Seven Years' War, to the coast of Scotland. But, again, it carried to Scotland a number of casks of palm-oil, that were recognised, by their marks and brands, to be part of the cargo of a ship that had been wrecked near Cape Lopez, in Africa. How could this last remarkable drift come to pass? Simply thus:—The Gulf-stream, which we have compared to a river, is in reality a part of a great system of oceanic circulation. The branch that, as we have said, turns off from the British Islands, southwards to the Azores, joins the great equatorial current, which flowing to the westward from the coast of Africa, enters the Caribbean Sea, and emerges from the Straits of Florida as the Gulf-stream. The casks of palm-oil, then, had twice traversed the Atlantic—first from east to west, in the equatorial current, and secondly, from west to east, in the Gulf-stream—before they found a resting-place on the coast of Scotland.

To compare small things with great: if we were to place little pieces of cork, chaff or other light bodies, in a basin of water, and give the water a circular motion, the light substances would crowd together in the centre, where there is the least motion. So it is in the great basin of the Atlantic, where the Sargasso Sea forms the centre of the whirl caused by the circular

motion of the equatorial current and the Gulf-stream. This sea, situated about midway in the Atlantic, in the triangular space between the Azores, Canaries, and Cape de Verd Islands, covering a space equal in extent to the valley of the Mississippi, is so thickly matted over with a peculiar weed (*Fucus natans*,) that the speed of vessels passing through it is often greatly retarded. To the eye, at a short distance, it seems substantial enough to walk upon, and countless hosts of small crustacea dwell on this curious carpet of the ocean. Columbus sailed through it, on his first voyage of discovery, in spite of the terrors of his less adventurous companions, who believed that it marked the limits of navigation; and its position has not altered since that time. This Sargasso, or Sea of Lentils, as the Spaniards first termed it, has a historical interest. In the celebrated bull of Pope Alexander VI. in 1493, when he divided the world between the Spaniards and the Portuguese, he decreed that the Sargasso Sea was to be their mutual boundary to all eternity!

The waters of the Gulf-stream do not, in any part of their course, touch the bottom of the sea. They are everywhere defended from so comparatively good a conductor of heat by a cushion of cold water, one of the best of non-conductors. Consequently, but little heat is lost, and the genial warmth is carried thousands of miles to fulfil its destined purposes.

On a winter-day, the temperature of the stream, as far north as Cape Hatteras, is from twenty to thirty degrees higher than the water of the surrounding ocean. Even after flowing 3000 miles, it preserves in winter the heat of summer. With this temperature it crosses the fortieth degree of north latitude, and there overflowing its liquid banks, spreads itself out, for thousands of square leagues, over the cold waters around, covering the ocean with a mantle of warmth, to mitigate the climate of our high northern latitude. Moving now more slowly, but dispensing its genial influence more freely, it at last meets the British islands. By these it is divided, one part going into the polar basin of Spitzbergen, the other entering the Bay of Biscay; but each with a warmth considerably above the ocean temperature.

Modern ingenuity has suggested a well-known method of warming buildings, by means of hot water. Now, the north-western parts of Europe are warmed, in an exactly similar manner, by the Gulf-stream. The torrid zone is the furnace; the Caribbean Sea and Gulf of Mexico, the boilers; the Gulf-stream, the conducting-pipe; from the Banks of Newfoundland to the shores of Europe is the great hot-air chamber, spread out so as to present a large surface. Here the heat, conveyed into this warm-air chamber of mid-ocean, is taken up by the prevailing west winds, and dispensed over our own and other countries, where it is so much required. Such, in short, is the influence of the Gulf-stream upon our climate, that Ireland is clothed in robes of evergreen grass: while in the very same latitude, on the American side of the Atlantic, is the frost-bound coast of Labrador. In 1831, the harbour of St. John's, Newfoundland, was closed with ice so late in the season as June; yet the port of Liverpool, two degrees further north, has never been closed by frost in the severest winter. The Laplander cultivates barley in a latitude which, in every other part of the world, is doomed to perpetual sterility. The benefit thus conferred on our country by the Gulf-stream is a remarkable accident in our condition. It obviously depends on the Gulf of Mexico continuing to be a gulf, which, however, it might easily cease to be. A subsidence of the Isthmus of Panama to the extent of a couple of hundred feet—and such subsidences have taken place in geological times all over the world—would allow the equatorial current of the Atlantic to pass through into the Pacific, instead of being reflected back to our coasts. Britain would then become a Labrador, and cease to be the seat of a numerous and powerful people.

While the Gulf-stream is covering our shores with verdure, ripening the harvests of England and the vintage of France, its influence is equally beneficial, at its fountain-head, in the western world. The Caribbean Sea and the Gulf of Mexico are encompassed on one side by the chain of West India Islands, and on the other by the Cordilleras of the Andes, contracting with the Isthmus of Darien, and again expanding over the plains of Central America and Mexico. On the extreme summits of this range are the regions of eternal snow; next in descent is the *tierra templada*, or temperate region; and lower still, is what the Spaniards truly and emphatically have termed *tierra caliente*, the burning land. Descending still lower, is the level of the sea, where, were it not for this wonderful system of aqueous circulation, the peculiar features of the surrounding country assure us, we should find the hottest and most pestilential climate in the world. But as the waters become heated, they are carried off by the Gulf-stream, and replaced by cooler currents entering the Caribbean Sea. The surface-water flowing out is four degrees warmer than the surface-water entering to supply its place.

As in a hot-water apparatus for warming a building—to keep up the simile—the water cooled in the hot-air chamber flows back to the boiler; so one part of the waters of the Gulf-stream, after giving out their heat, flow towards the equatorial current, the other to the polar basin of Spitzbergen. The secrets of the arctic regions are hidden by impenetrable ice; but we know that a return-current, bearing immense icebergs, comes down from the dreary north, through Davis's Strait, and meets the Gulf-stream at the banks of Newfoundland. Scoresby counted

at one time six hundred icebergs starting off on their southward journey by this current, which, pressing on the waters of the Stream, curves its channel into a 'bend,' in shape resembling a horse-shoe, and some hundreds of miles in area. This bend is the great receptacle or harbor of the icebergs which drift down from the north, and are here melted by the warm waters of the Stream. Who dare say that, in the course of ages, the Banks of Newfoundland have not been formed by the earth, stones, and gravel carried down to that spot by these very icebergs?

Such is the distinctness kept up between the warm and cold water, that, though the northern current forms a large bend or indentation in the Gulf-stream, it does not commingle with it; the former here divides into two parts—one actually under-running the stream, the other flowing south-westerly between it and the coast of America. It is this last branch of the cold current that affords the citizens of the United States a refreshing sea-bathing in summer, and an unlimited supply of the finest fish. In all parts of the world, the most plentiful supply and most delicious quality of fish are found in cold water. The habitat of certain kinds of fish unerringly indicates the temperature of the water; and it is highly probable that cold currents are the great pathways along which migratory fishes travel from one region to another.

Though the Gulf-stream was noticed by Sir Humphrey Gilbert in the sixteenth century, we are indebted to the celebrated Dr. Franklin for the first chart of its course. Being in London in 1770, his attention was called to a memorial which the Board of Customs at Boston had sent to the Lords of the Treasury, stating that the Falmouth packets were generally a fortnight longer on their voyage to Boston than common trading-vessels were from London to Rhode Island. They therefore begged that the Falmouth packets should be sent to Providence instead of to Boston. This appeared very strange to Franklin, as the traders were deeply-laden and badly-manned vessels, to say nothing of the extra distance between London and Falmouth. He accordingly consulted a Nantucket whaling-captain named Folger, who happened to be in London at the time. Folger immediately explained the mystery by stating, that the Rhode Island trading-captains were acquainted with the course of the Gulf-stream, while those of the English packet-service were not. The latter kept in it, and were set back from sixty to seventy miles per day, while the former merely ran across it. At the request of Franklin, the Nantucket whaler traced the course of the stream, and the doctor had it engraved, and sent copies to the Falmouth captains, who treated the communication with contempt. This course of the Stream, as laid down by Folger, has been retained in our charts almost to the present day. Who, we might ask, taught this unscientific Nantucket whaler so correct a course of this mighty current, then so little known? It was the whales, the gigantic prey he followed in the ocean. The right whale (*Balæna mysticetus*,) as seamen term it, never enters the warm water of the Gulf-stream: it, as well as the warm waters of the torrid zone, is as a wall of fire to these creatures. But they delight to congregate, seeking for food, along the edges of the Stream; and thus Folger, through the experience of many voyages, was enabled so correctly to denote its course.

Our space warns us to conclude, ere we have scarcely passed the threshold of this interesting subject. But we must observe, that the Gulf-stream of the Atlantic has its counterpart in the Pacific. The latter flows out of the Straits of Malacca, just as the Atlantic current flows out of the Straits of Florida. The coast of China is its United States; the Philippines, its Bermudas; the Japanese islands, its Newfoundland. The climate of the Asiatic coasts correspond with those of America along the Atlantic; and those of Columbia, Washington, and Vancouver, are duplicates of those of Western Europe and the British islands; the climate of California resembles that of Spain; and the sandy plains and rainless regions of Lower California, remind us of Africa. The course of this China Stream has not yet been traced out, but it sets southwardly along the coast of California and Mexico, as the Gulf-stream does along the west coast of Africa to the Cape Verd Islands. This current, too, has its Sargasso Sea; to the west, from California, of the southwardly set, lies the pool in which the drift-wood and sea-weed of the North Pacific are gathered. Inshore of, but counter to, the China Stream, along the eastern shores of Asia, is found a current of cold water, resembling that between the Gulf-stream and the American coast. It, too, like its counterpart, is the nursery of most valuable fisheries. The fisheries of Japan are as valuable in the east as those of Newfoundland in the west. Thus the people of widely distant regions are indebted for their supplies of excellent fish to the cold waters which the currents of the sea carry to their shores.

By the researches of Lieutenant Maury into the mysteries of oceanic phenomena, the art of navigation has already been greatly advanced. The shortening of long and tedious passages, the lifting and bringing, as it were, the distant isles and great marts of the sea so many days nearer to each other, has not escaped the attention of a practical people in this utilitarian age. Yet there will be other, though less apparent benefits derived from the hand of science, drawing aside the curtain that so long has enshrouded the secrets of the deep. Seamen will take an interest in their profession beyond its mere practical technicalities. They who have the best opportunities of observation, will become observers;

and what Scoresby has accomplished in the north, will be followed out all over the globe. Captain Methven, in a recent work, speaking of the advantages of educational influence among those who intend to follow the sea, says: 'To the cultivated lad, there is a new world spread out when he enters on his first voyage. As his education has fitted, so will he perceive, year by year, that his profession makes him acquainted with things new and instructive. He will dwell with interest on the phases of the ocean—the storm, the calm, and the breeze, and will look for traces of the laws which regulate them. All this will induce a serious earnestness in his work, and teach him to view lightly those irksome and often offensive duties incident to the beginner.' We may go further, and say that his mind will be led from nature upwards to its Great Architect: and by being a wiser, he will become a better man. As an instance, we may conclude with the following interesting extract from a letter written by an old American shipmaster to Lieutenant Maury:—

'I am free to confess that for many years I commanded a ship, and although never insensible to the beauties of nature upon the sea or land, I yet feel that, until I took up your work, I had been traversing the ocean blindfolded. I feel that, aside from any pecuniary profit to myself from your labors, you have done me good as a man. You have taught me to look above, around, and beneath me, and recognise God's hand in every element by which I am surrounded. I am grateful for this personal benefit.'

Need the writer, who himself for many years traversed the great deep, say more!—*Chambers' Journal.*

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For Friends' Intelligencer.

## THE TRUE PILGRIM.

BY EDWARD C. JONES.

He was toiling on the road,
Through the heat and in the shower,
Plucking as he passed along,
Many a little wayside flower.
But while pleased to see their dyes,
In their balm-breath revelling,
Still his gaze was on the skies,
Mindful of no fleeting thing.

Crimson shell from ocean's hall,
Braided rainbow in the heaven,
Song bird in the cedar tall,
Breezes low at summer even,
Brought their beauty to his heart,
Tuned its every quivering string,
Still he sought a better part,
Mindful of no fleeting thing.

Long he gazed in childhood's face,
Caught its smile and prized it dear,
And its choral peal of mirth
Fell like anthem on his ear.
Joyous sat he by the fire,
One of friendship's social ring,
Still his fellowship was higher,
Mindful of no fleeting thing.

In the world, but far removed
From its vexing influence,
Yonder was the home he loved,
And he drew his comfort thence.
His were aims attuned to Right,
Pleasures free from venomed sting,
Walking thus by Faith, not Sight,
Mindful of no fleeting thing.

Spurning self, his heart was knit
To the brotherhood of Man,
And in channels deep and large,
His refined affections ran.
As the birdling seeks its nest,
Poising not on quickened wing,
So he sped to gain his rest,
Mindful of no fleeting thing.

Thus to honored age he came,
Still in meekness but a child,
Men revered his saintly name,
For it shamed their passion's wild.
And the pilgrim on his bier,
Mid their sobs to dust was borne,
Knew they well, that calm and clear,
Rose for him a brighter morn.

10*th* *mo.* 1855.

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## THE DEW DROP AND THE STREAM.

"The following lines, are said to be the production of a servant girl from Devonshire."

The brakes with golden flowers were crowned,
And melody was heard around,
When near the scene a dew drop shed
Its lustre on a violet's head.
And trembling to the breeze it hung;
The streamlet as it rolled along
The beauty of the morn confessed,
And thus the sparkling pearl addressed.

"Sure, little drop, rejoice we may,
For all is beautiful and gay,
Creation wears her emerald dress,
And smiles in all her loveliness;
And with delight and pride I see
That little flower bedewed by thee,
Thy lustre with a gem might vie,
While trembling in its purple eye."

"Ay, you may well rejoice, 'tis true,"
Replied the radiant drop of dew;
"You will, no doubt, as on you move,
To flocks and herds a blessing prove.
But when the sun ascends on high,
Its beams will draw me towards the sky,
And I must own my little power—
I've but refreshed an humble flower."

"Hold!" cried the stream, nor thus repine,
For well 'tis known a Power Divine,
Subservient to His will supreme,
Has made the dew-drop and the stream.

Though small thou art, (I must allow,)
No mark of Heaven's contempt art thou;
Thou hast refreshed a humble flower,
And done according to thy power."

All things that are, both great and small,
One glorious Author formed them all;
This thought may all repinings quell,
What serves his purpose serves him well.

## CAST IN THY MITE.

BY E. H. BURRINGTON.

He who gives little from his store,
If little be his means,
Treads on as far the heavenward shore,
As he who gives ten times the more,—
If ten times more his gains.
He may be useful here who would,
And walk within a zone of light;
There is a treasury of good;—
Cast in thy mite!

Thou may'st not have one piece of gold
To bless the poor man's palm;
But angels will with joy behold,
If thou hast words which can be told
His troubled heart to calm;
For kind words are as honied streams,
And he, the walker of the sod,
Who gives them to his brother, seems
A messenger from God.

If thou dost see the fatherless,
And watch the widow's tear,
Dry up the fountains of distress,
Be thou the father quick to bless
The husband ever near:
Though down they slide Misfortune's slope,
They live not in a starless night:
They have a treasury of hope:—
Cast in thy mite.

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## AN ASTRONOMICAL YEAR.

The duration of the astronomical year, as now determined with great precision, consists of three hundred and sixty-five days, five hours, forty-eight minutes, and fifty-one seconds. The real length of the year is thus six hours greater than it was according to the estimate of the old astronomers; so that, if we reckoned by their calculation, on every fourth year a day would be lost. Such a circumstance must, in a comparatively short period, produce the most awkward results: a man born in spring would, before gray hairs covered his head, have to celebrate his birthday at the end of winter; harvest would, after the lapse of a few years, have its festival in midsummer; and the time would come when summer and winter would change names. It became therefore necessary, in all countries where the astronomical year was used, to correct the calendar at intervals, to prevent the increase of an evil for which no provision was made.

Julius Cæsar was probably the first man in authority who attempted a permanent correction of the calendar, assisted by Sosigenes, an Egyptian astronomer. Their device was, to add a day, every fourth year, to February, and the principle adopted was so excellent that it has been both retained and extended. This correction of time was ordered to be made in all countries where the Roman authority was acknowledged; and to secure a uniformity of dates, the sixth day before the kalends of March was to be reckoned twice, for which reason, the fourth year, now called leap year, was by the Romans designated bissextile. But this clever contrivance did not perfectly correct the calendar, or cause the civil and astronomical years to remain long in permanent agreement. The addition thus made every fourth year was eleven minutes more than was required for the correction; and although this may seem a trifling error, yet spread over so long a period, it soon became a very marked quantity, and in the course of centuries threatened to interfere with some social and many ecclesiastical arrangements. The Julian year, therefore, possessing an element of error, could not permanently remain in use, unless a means of absorbing the miscalculation it perpetuated could be discovered.

The necessities of the Roman Church ultimately led to the requisite improvement. The Council of Nice, which assembled in the year 325 A. D., ordered, among other matters, that Easter should be celebrated on the first Sunday after the full moon following the vernal equinox. This was a guide to many other of the Church festivals, so that any alteration in it caused a much greater confusion than at first sight appears. Now it was well known that in 325, when the council met, the 21st of March was the vernal equinox; but in the fifteenth century it fell on the twelfth day of that month—a difference sufficiently important to force upon the attention of the pope and the conclave the necessity of correcting the calendar.

This enterprise was meditated many years before it was accomplished; but it would probably have been effected in the pontificate of Sextus IV., instead of Gregory XIII., if the preliminary calculations had not been interrupted by the sudden death of John Muller, the astronomer selected to advise the pontiff, and prepare for the contemplated change. This rare genius, so well known as the founder of the printing-house at Nuremberg, though it is as an astronomer that he is most deserving of honor, was summoned from his useful labors to assist the pope in correcting the calendar. He unwillingly obeyed the command, and repaired to Rome, where he had at an early period of life exhibited his great talents, to undertake the task; but the year after his arrival, in the fortieth of his age, he died, or as some say, was murdered by the sons of an eminent Greek scholar, whom he had mortified by some severe criticisms. Sextus being thus deprived of the assistance of the man best able to accomplish his object, lost the honor of effecting his useful design.

Pope Gregory XIII. was a man of science, and we have little cause to regret that the task of reforming the calendar fell into his hands. To restore the civil year to a correspondence with the astronomical, he ordered that the 5th of October, 1582, should be called the 15th; for at that time ten days had been lost, and the vernal equinox fell on the 11th of March instead

of the 21st. To prevent the intrusion of the same errors in the measurement of time in future ages, and to secure the recurrence of the festivals at the same period of the year, he further decreed that "every year whose number is not divisible by four, without a remainder, consists of three hundred and sixty-five days; every year which is so divisible, but is not divisible by one hundred, of three hundred and sixty-six; every year divisible by one hundred, but not by four hundred, of three hundred and sixty-five; and every year divisible by four hundred consists of three hundred and sixty-six. A more perfect correspondence of the civil and astronomical years will probably never be obtained than by the use of the rules enforced in this decree; for after the lapse of four thousand two hundred and thirty-seven years, the error will be less than a day. In their preparation every source of disagreement was duly estimated, and as far as possible corrected. The allowance of an extra day every fourth year is, as already explained, an excess; but this is not allowed to accumulate, for, at the commencement of every century, when it amounts to about three-fourths of a day, a deduction of one day is made. An error of about six hours is thus left as the accumulation of one hundred years, but this is not passed without correction; for every year divisible by four hundred, which ought to be a common year by the ordinary rule, is made to consist of three hundred and sixty-six days.

Little opposition would probably have been made to the introduction of these changes in European states, so generally was the necessity of a correction admitted, had they not been enforced by the pope, under an authoritative command for the immediate and universal adoption of the reformed calendar. The princes who acknowledged the sway of the Bishop of Rome gave an uncomplaining and apparently willing compliance; but in the Protestant states the introduction of a very useful and important correction in the measurement of time was long delayed, from a recollection of the source from which it came, and the impudent assumption of a command with which it was announced. At last the Gregorian calendar was universally adopted by the European states, but by Protestant communities always with a protest against the interference of the pope, and an entire rejection of his authority. The new style was established in Great Britain by act of Parliament, as might be expected in a country so justly jealous of its civil and religious privileges, in the year 1752.

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There are men who by long consulting only their own inclinations, have forgotten that others have a claim to the same deference.

## PHILADELPHIA MARKETS.

Flour and Meal.—The export demand has fallen off, but Flour of good standard brands is still held at $9 50. There is a fair inquiry from retailers and bakers at $9 50 up to $11 for common and fancy brands. Rye Flour is dull at $6 50, and Corn Meal at $4 00 per bbl.

Grain.—There is an active demand for Wheat, but sales are limited for want of stock Sales of Southern and Pennsylvania red at $2 15 per bushel, and sales of prime white at $2 25 a 2 30. Rye is in steady demand at $1 18 per bushel. Corn is in request. Sales of old yellow at $1 00, and new yellow at from 70 to 75c. Oats are dull at 41 a 43c per bushel, afloat.

Cattle Market.—Arrivals at William L. Torbert's Avenue Drove Yards, (Twenty-Fourth Ward,) 480 cattle, 3000 sheep, 120 cows and calves, and 30 horses. Beeves selling for $4 to 4 75 on foot, and $8 to $9 50 net. Sheep, $4 to 4 50 per lb., and $2 75 to $4 50 per head. Lambs, $2 to $4 each. Cows and Calves, $25 to $80 each. 200 head Western cattle driven to New York. Chester and Lancaster county cattle being rather better than Southern or Western, bring the highest figures.

CHESTERFIELD BOARDING SCHOOL FOR BOYS.—The Winter term of this Institution will commence on the 19th of Eleventh month, 1855, and continue Twenty weeks.

Terms, Seventy Dollars per session, one-half payable in advance, the other in the middle of the term. No extra charges. For further particulars, address

HENRY W. RIDGWAY,
Crosswicks P. O., Burlington Co., N. J.
10th mo. 13th, 1855—3m. pd.

IT is intended to commence the Winter Session of LONDON GROVE BOARDING SCHOOL FOR YOUNG MEN AND BOYS on the 5th of Eleventh month next. Terms $65 for Twenty weeks. For Circulars, including References and further particulars, enquire of BENJ. SWAYNE, *Principal*,
9th mo. 22. London Grove P. O., Chester Co., Pa.

BYBERRY BOARDING SCHOOL FOR GIRLS. The First Session of this School, which will be opened by Jane, Annie and Mary S. Hillborn, will commence the first Second day of the Eleventh month next, and continue twenty weeks.

It is located in a healthy and pleasant situation in Byberry, Twenty-third Ward, Philada., with easy and cheap access to the city twice a day by steamboat from Bickley's Landing, or by cars from Cornwell's Depot, either of which is about two miles distant. The course of instruction will comprise the usual branches of a liberal English education, with Mathematics and Drawing.

Every attention will be given to promote the health, comfort and progress of the pupils.

Terms.—For Tuition, Boarding and Washing, $60 per session, payable one-half in advance.

For circulars, direct to JANE HILLBORN,
Byberry, Pa.

*References.*

Charles Stokes, Rancocas, N. J.
William Parry, Cinnaminson, N. J.
Charles Kaighn, Camden, N. J.
Charles Williams, White Marsh, Pa.
John Simmons, No. 437 N. Seventh St., Philada.
A. T. W. Wright, No. 604 N. Fifth St., Philada.,
*Principal of the Normal School.*
8th mo. 4—4m. pd.

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